LWG COMMENTS ON EPA'S DECEMBER 19, 2014, FEASIBILITY STUDY PROPOSED FINAL DRAFT SECTION 1

EPA provided a draft of Section 1 of its revised Feasibility Study on July 8, 2014 and engaged in technical discussions with the LWG that concluded on August 29, 2014. On that date the LWG submitted to EPA a letter and attachments that included a list of concerns related to EPA's Section 1, along with a redline-strikeout set of suggested edits to Section 1. On December 18, 2014, EPA provided the proposed final draft of Section 1 of the revised FS to the LWG. It appears EPA did not address most, if any, of the LWG's stated concerns or incorporate its suggested edits into the December 18 proposed final draft Section 1.

EPA did not provide a written response to the LWG's August 29, 2014 comments and indicated by telephone on December 19 that further technical discussion was unnecessary, because the LWG's concerns were fully vetted during the original review period. Consistent with the December 17, 2014 revisions to the FS Revision Process Agreement, we understand that EPA is not directing the LWG to incorporate its revisions to Section 1 or make other modifications or changes to the draft FS at this time. Therefore, neither the delivery of EPA's December 18 revisions to FS Section 1 nor the expiration of the 15 day technical resolution period trigger any deadline for the initiation of dispute resolution.

The LWG requests that EPA address its comments into the final revisions to FS Section 1. To provide a clear record in the absence of any technical discussions following delivery of EPA's December 18 draft, the LWG reiterates its August 29, 2014, significant concerns with EPA's "streamlined" Section 1. It is the LWG's position that the deleted information discussed below provides necessary support, both scientific and legal, for EPA's remedy selection. Removal of the content is contrary to EPA guidance and practice. *See, e.g.*, Lower Duwamish River Feasibility Study Sections 2.1 (Environmental Setting), Section 2.3 (Conceptual Site Model), and Section 2.4 (Source Control Strategy).

1 – DELETION OF CONCEPTUAL SITE MODEL

Although EPA retained some references to a few conceptual site model (CSM) fate and transport processes, the bulk of the Draft FS CSM description was removed. Critical CSM information for FS alternative development and evaluation that was removed includes:

1) Physical factors and processes (e.g., descriptions of bathymetry, deposition/erosion, debris, substrate types, and shoreline conditions).
2) Site uses (e.g., channel and maintenance dredging areas).
3) Human activities (e.g., vessel traffic patterns, propwash, and historical remediation).
4) Chemical distributions (e.g., subsurface contamination figures, biota tissue chemical concentrations, transition zone water [TZW] concentrations).
5) Biological habitats and restoration sites.
6) Site sources (e.g., details in Appendix Q).

7) Potential risks (e.g., summaries of certain scenarios and receptors are missing).

8) A thorough presentation and discussion of fate and transport processes.

EPA's CSM relies almost entirely on a schematic from the 2012 Draft FS, which is insufficient to convey the existence and interplay of these various CSM factors (as compared to the detailed CSM maps in 2012 Draft FS Figure 2.6-2, which EPA deleted). In addition, EPA's CSM discussion does not refer the reader to the location of this information either in the RI, later in the FS, or someplace else. Adding a reference to the RI CSM will not fully address this problem because some aspects of the FS CSM are not discussed extensively in the RI, including extent of in-water debris, vessel traffic patterns, prop wash, historical remediation, habitat restoration sites, updated source information, and fate and transport modeling elements.

The inclusion in the FS of the CSM information noted above and identified in the LWG's August 29th detailed comments on Section 1 is necessary to provide a foundation and rationale for many later discussions in the FS and ultimately for the evaluation and selection of a remedial alternative. A few obvious examples of their necessity include the following:

1) Descriptions of bathymetry and deposition/erosion are needed to understand how potential remedial technologies might apply to various areas of the Site.

2) Identification of site uses as they relate to navigation is critical to explaining why dredging versus in situ technologies may be more prudent in particular areas.

3) Identification of current and potential future human activities similarly is critical to evaluating remedial technologies, such as dredging and capping.

4) An understanding of subsurface contaminant, tissue and TZW concentrations (at an FS-level of detail) is essential to defining volumes for alternatives. Also, concentrations in tissue relate to bioaccumulation risks that the alternatives need to indirectly address, and concentrations in TZW relate to the potential effectiveness of capping.

5) Biological habitat information is critical to assessing the potential habitat impacts of each alternative and the potential need for mitigation. EPA specifically instructed the LWG to include habitat information in the 2012 Draft FS, yet did not include it in its own draft FS.

6) Details of site sources are needed to understand the relationship between in-water alternatives in each sediment management area and potential ongoing upland sources that, if not controlled, could recontaminate sediment.

7) A full understanding of potential risks identified in the baseline risk assessments is needed in order to ensure that alternatives are developed and evaluated with regard to reduction of those potential risks.

8) A thorough understanding of fate and transport processes supports FS discussions of source impacts, recontamination, monitored natural recovery (MNR) and enhanced monitored natural recovery (EMNR) effectiveness, capping effectiveness, dredge releases, and remedy effects on bioaccumulation risks.

EPA has indicated during FS Section 1 discussions that many of these factors will be discussed later in the FS where these issues arise. EPA has not provided the LWG any indication as to where or how it intends to relocate this information, so the LWG cannot assess whether these issues will be adequately addressed elsewhere.

Finally, the deletion of most CSM components from the FS is especially problematic given the fact that we are still negotiating modifications to the CSM presentation in the revised RI (i.e., Section 10). EPA's sediment guidance is clear that all of the elements of the CSM discussed above must be understood to support the FS. (EPA 2005) Specifically, the sediment guidance provides a detailed description of the CSM elements necessary to support alternatives evaluation in the FS as well as a strong preference that CSM information be "summarized … in one place." EPA (2005).

2 – DELETION OF SEDIMENT/WATER BACKGROUND

EPA removed all descriptions of background conditions. Background conditions must be summarized in Section 1 to support the later FS discussion of primary remediation guidance concepts related to background. These guidance concepts include, but are not limited to, the following: 1) EPA typically does not set cleanup levels below background concentrations (EPA 2002a); and 2) Remedial Action Objectives (RAOs) should reflect objectives that are achievable from the site cleanup (EPA 2005), and remediation below background is not an achievable objective. EPA guidance is also clear that establishing background conditions is vital to the CSM (EPA 1988, 2005).

EPA has indicated that sediment background (at least as a broad concept) will be used in preliminary remediation goal (PRG) selection for some contaminants of concern in Section 2 and in alternative evaluations in Section 4. The LWG is currently in formal dispute resolution with EPA concerning EPA's selection of a single set of upriver sediment background values for the RI, which presumably EPA intends to carry forward into the FS for various purposes (e.g., PRG development, equilibrium assessment, alternatives development, and detailed evaluations of alternatives). For the reasons stated in the Request for Dispute Resolution submitted by the LWG on August 26, 2014, the values identified in Table 7.3-1b (and the related Appendix H Table H-2b) of the RI Section 7 revision agreed to by EPA and the LWG on December 12, 2013 should be the values carried forward into the FS. The FS must include some description of this concept to support these later uses of background. Similar to the CSM issue, to the extent that EPA intends to address background later in the FS, this approach will likely result in disjointed textual tangents on fundamental site-specific concepts.

Also, based on PRG tables provided by EPA up through August 6, 2014, it appears that EPA is establishing surface water and TZW PRGs (which LWG believes are inappropriate for this Site). If so, background values for surface water and TZW are needed so that cleanup levels are not set below background and are achievable per EPA guidance (EPA 2002a, 2005). In many cases, it is likely that the surface water and TZW PRGs EPA provided to the LWG will not be technically

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practicable to achieve due to ongoing upstream contributions, or groundwater sources that will not be addressed by the anticipated sediment remedy. EPA has indicated the Agency would consider technical impracticability during the post-remedy long-term monitoring phase. Again, this is inconsistent with the National Contingency Plan, which requires consideration of technical impracticability in remedy selection, as well as with guidance that states the RAOs and cleanup goals need to be achievable. 40 C.F.R. §300.430(f)(1)(ii)(C)(3); (EPA 2002a, 2005).

EPA indicated during the FS technical discussions that there were insufficient site data in surface water and TZW to develop background levels in these media. The LWG disagrees. There are sufficient site data to establish background for surface water, and literature data can be used to establish TZW background levels using methods detailed in our June 19, 2014 comments.

3 – SOURCE ISSUES

The summary of sources in the draft revised FS Section 1 is both factually inaccurate and much less clear than the 2012 Draft FS.

Deletion of Source Control Inventory and Status – EPA removed the summary of the source control inventory and status information and any reference to the detailed inventory in Appendix Q that EPA previously directed the LWG to include in the Draft FS. As EPA noted in its November 23, 2010 letter to the LWG, the tables were intended to "provide a status of ongoing, or potentially ongoing, upland and overwater sources to Portland Harbor in order to support the potential recontamination assessment in the FS." This is critical information for the Revised FS, and it was prepared consistent with the most recent Oregon Department of Environmental Quality (DEQ) Milestone Report for Upland Source Control available at the time.

EPA indicated during the informal discussions on Section 1 in July/August 2014 that its revised text was reviewed by the EPA lead on source control and by DEQ representatives and that the text is consistent with the Source Control Summary Report subsequently issued by DEQ in November 2014. The LWG will need time to verify the site-specific information contained in the DEQ Source Control Report, and then compare it to EPA's modified text in FS Section 1. As stated in our August 29th letter to EPA, Northwest Pipe's August 22, 2014 letter demanding retraction of EPA's text under implicit threat of legal action perfectly demonstrates why the LWG cannot agree to include statements about non-LWG PRPs in an LWG-authored document where those statements cannot be verified against any existing reference. The fact that EPA immediately deleted all reference to Northwest Pipe as a potential groundwater source on the basis of Northwest Pipe's letter alone illustrates inconsistencies in selecting source information to include or exclude from the FS.

The source control information provides important context for the FS, and also supports EPA's prior issuance of general notice letters for the site and future issuance of special notice letters. The LWG will be reviewing the source control information in FS Section 1 against the DEQ's November 2014 Source Control Report and other available documentation as part of our evaluation of EPA's final FS.

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Inclusion of New Upland Groundwater Plume and Riverbank Contamination Text – The LWG has three major concerns regarding this text. First, the information lacks clarity and accuracy because EPA does not cite the information sources upon which it relied, does not explain the relationship between potential upland sources and within Site conditions, and includes significant factual errors with regard to many of the upland sites discussed. EPA's new text replaces the source control inventory information, which was clearly based on and consistent with the DEQ Milestone Report and DEQ's findings regarding the potential for upland sources to impact the Site.

Second, EPA presents this new information in the Site Nature and Extent section, even though this information pertains to upland sources that will not be addressed through the in-water remedies evaluated in the FS. Although EPA notes that groundwater information may impact capping decisions[1], most of the information appears irrelevant to actual conditions and potential sediment remediation within the Site boundary and is not linked to known data on Site conditions.

Third, on August 25, EPA indicated that bank erosion remedies up to the top of the bank will be included and evaluated in the FS, and the most recent Section 1 text states that "Bank conditions are summarized because EPA may include some bank areas above elevation 13.3 feet NAVD88 within the Portland Harbor Site based on future site-specific determinations." An important FS assumption is that sources, including bank erosion, will be controlled under the DEQ program at the time of the sediment remedy (EPA 2002b). EPA and DEQ have had a long-standing agreement to limit the lateral extent of the Study Area to an elevation of 13.3 North American Vertical Datum of 1988 (NAVD88), and it is critical to maintain this boundary since the RI (including the CSM and risk assessments) was developed with that boundary in mind. *"Upland" versus "In-water" Definition and Portland Harbor Elevation Datums*, (DEQ, July 9, 2003). Therefore the 13.3 NAVD88 boundary should be retained and utilized in the FS, and upland source control actions and remedies should not be evaluated in the FS.

Deletion of Stormwater Sources – Although EPA's new text in Section 1.2.3 extensively discusses groundwater and river bank sources, stormwater sources receive no similar discussion. There needs to be a balanced presentation of all sources in Section 1. Per the previous comments, this should be achieved by placing source information in a clearly marked source control subsection and using information from the Draft FS, with updates on source control status added where necessary.

[1] It is unclear why EPA is focusing only on capping when discussing the relevance of upland groundwater plumes in Section 1. Uncontrolled groundwater plumes that discharge unacceptable concentrations into the river will likely have greater implications for the effectiveness (or lack thereof) of dredge remedies, because no provision to control such discharges (e.g., via caps) is provided by dredge remedies.

4 – EARLY ACTION DATA

EPA's draft Section 1 text indicates that early action data are included in the Revised FS. As noted in the LWG's July 9, 2014 Draft LWG Responses to EPA's Proposed Dredge Depth Approach, EPA's plan for including early action datasets in various FS evaluations is currently unknown. For example, EPA's Section 1 draft proposes to use RI figures that clearly do not include the early action data. The LWG is concerned that without a detailed data plan, it will be difficult to understand the following: 1) which evaluations are using the original FS database and which are using additional early action datasets; and 2) whether differences in various evaluation conclusions in the Draft RI, Draft FS and Revised FS are the result of database differences versus technical issues.

On August 25, EPA requested that LWG prepare a new Section 1.3 that documents the FS sediment database and includes a modified Appendix R from the Draft FS that described the database rules. The LWG provided this to EPA on September 17. This subsection documents the current contents of the FS database; however, the EPA current plan for data uses within the FS is not currently understood by LWG, and the issues raised above regarding the need for a detailed data plan still stand.

5 – INCOMPLETE RISK ASSESSMENT SUMMARIES

The risk assessment summaries in the current EPA draft lack context and, therefore, do not accurately convey risk assessment conclusions. Regarding human health, for example, there is no discussion of any exposure scenarios other than fish consumption, and more information is needed to help the reader understand the infant scenario. Regarding ecological risks, for example, the stand alone statements presented by EPA misrepresent risk conclusions absent more explanation. The few points presented are not necessarily useful for making risk management decisions in the FS, and none of the important considerations behind the conclusions addressed in the Baseline Ecological Risk Assessment uncertainty sections are discussed. Attachment 1 of the LWG's August 29 letter provides specific redline edits that address the LWG's concerns regarding these summaries.

REFERENCES

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